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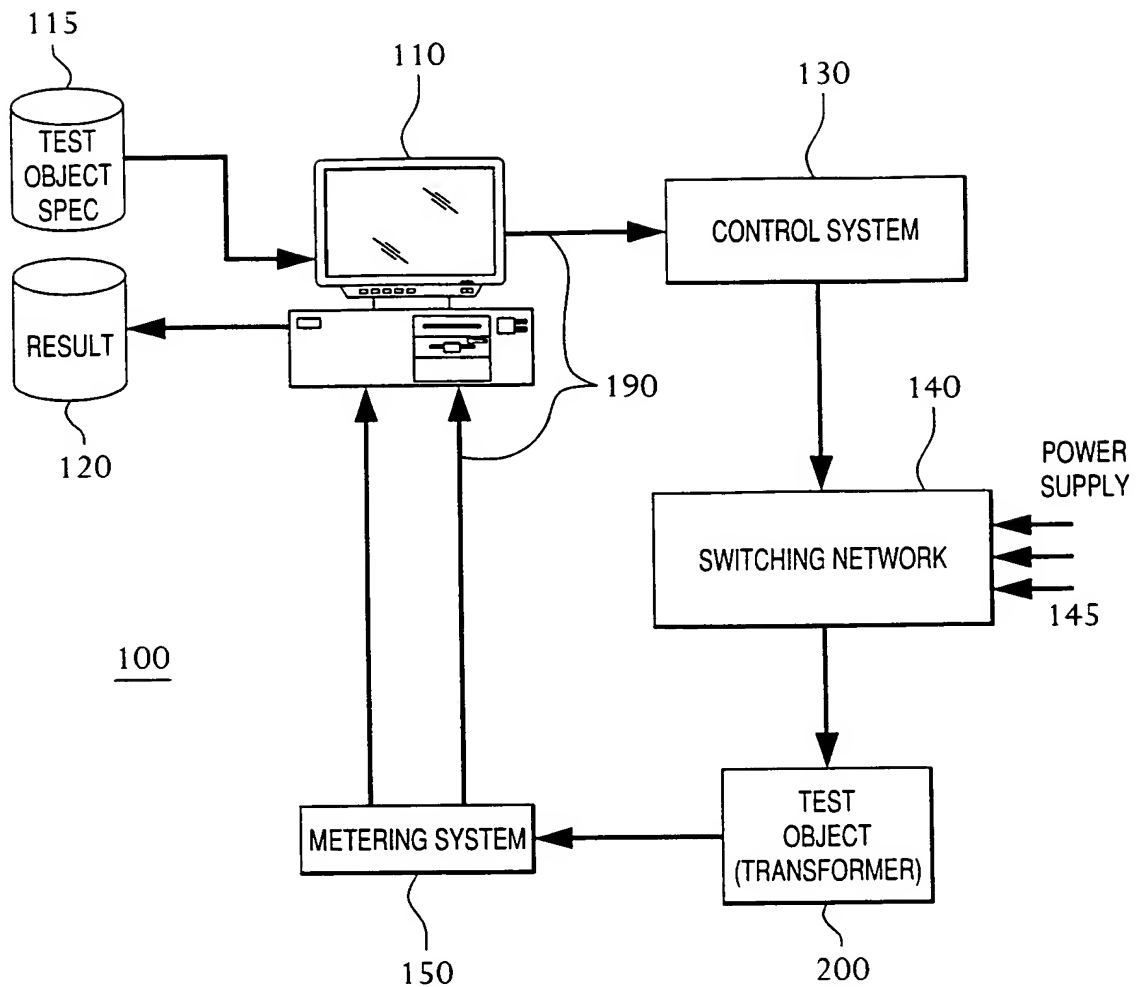


FIG. 1

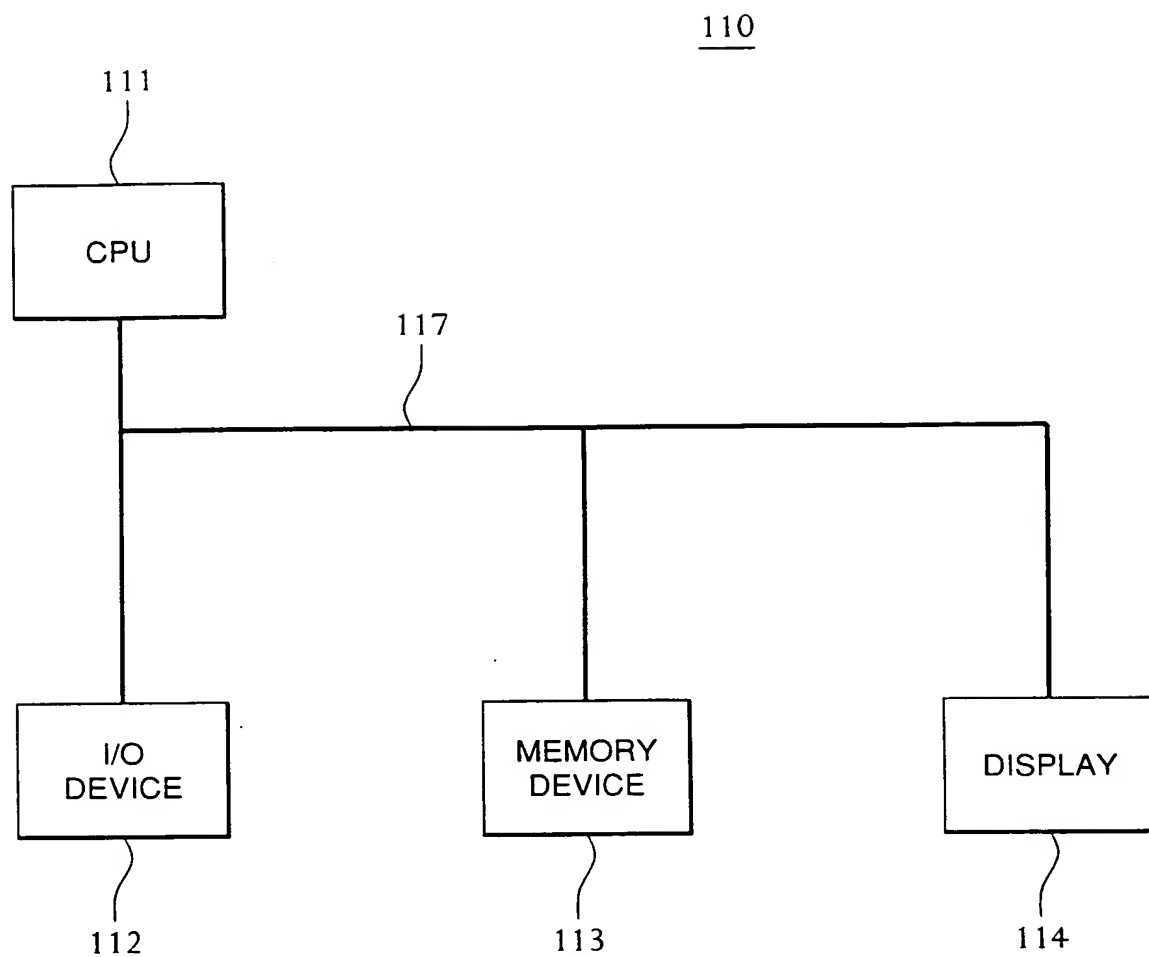


FIG. 2

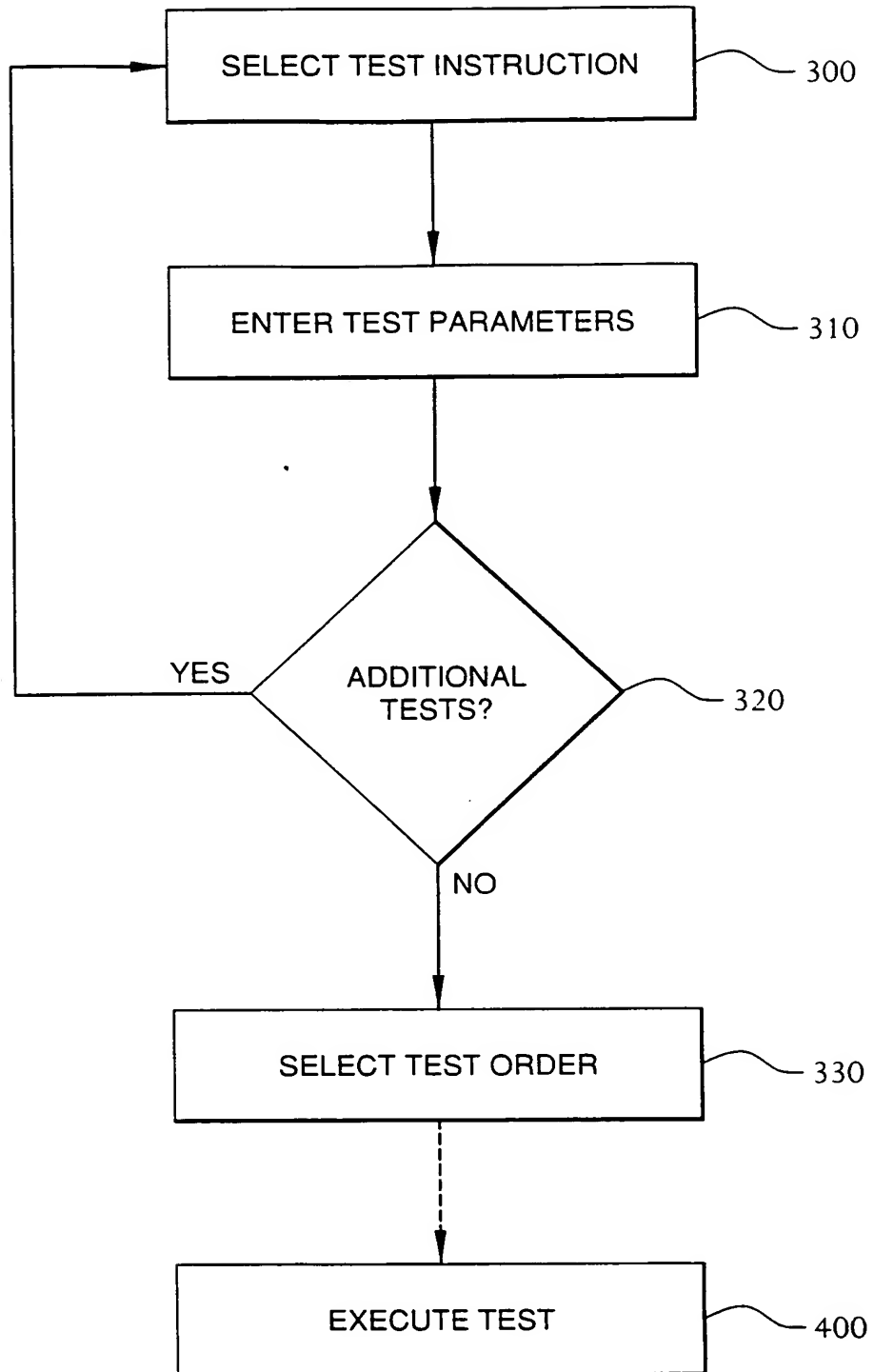


FIG. 3

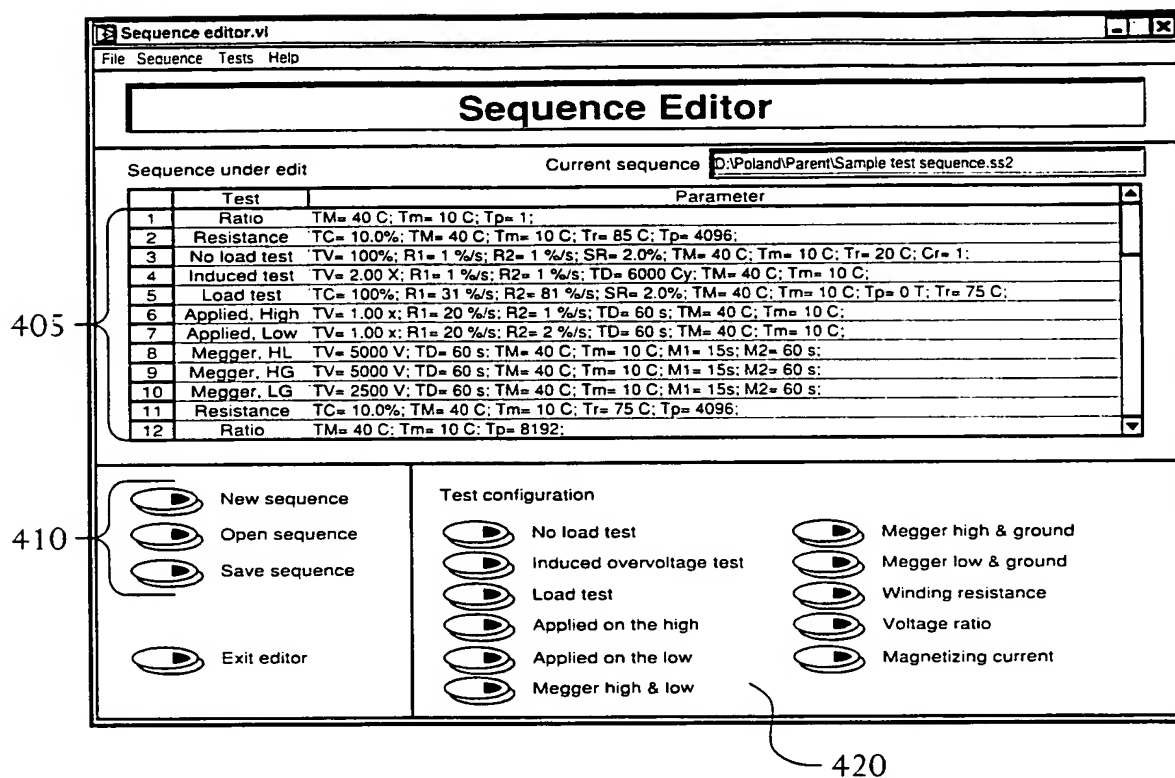


FIG. 4

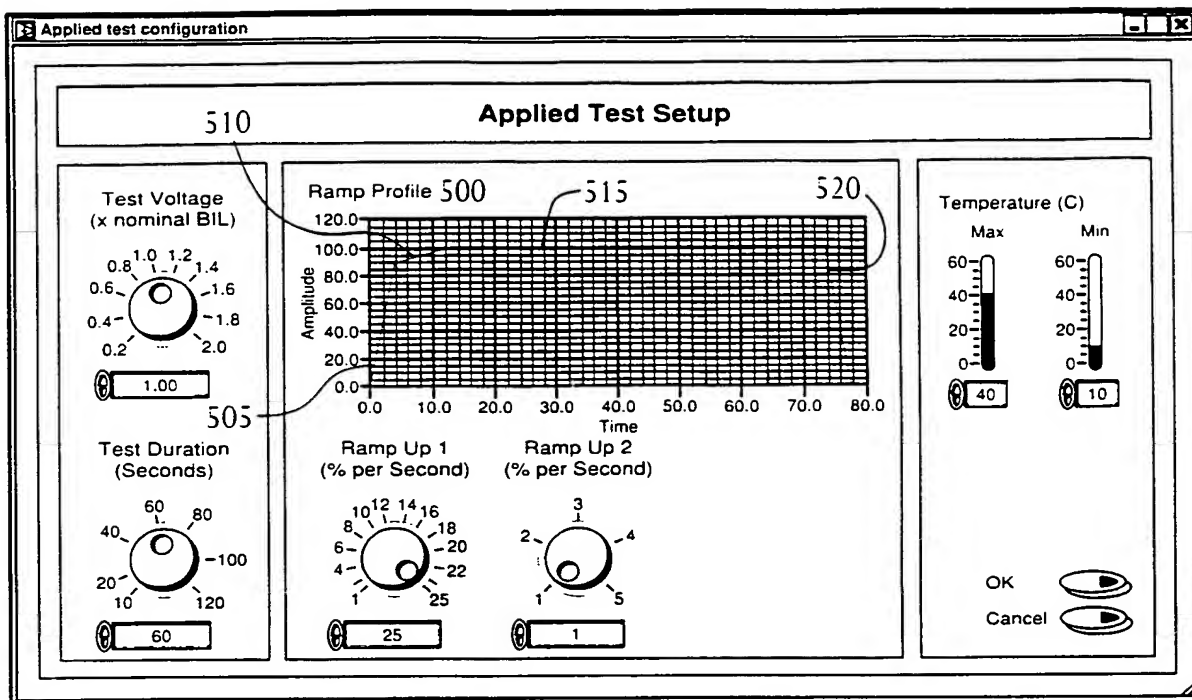


FIG. 5

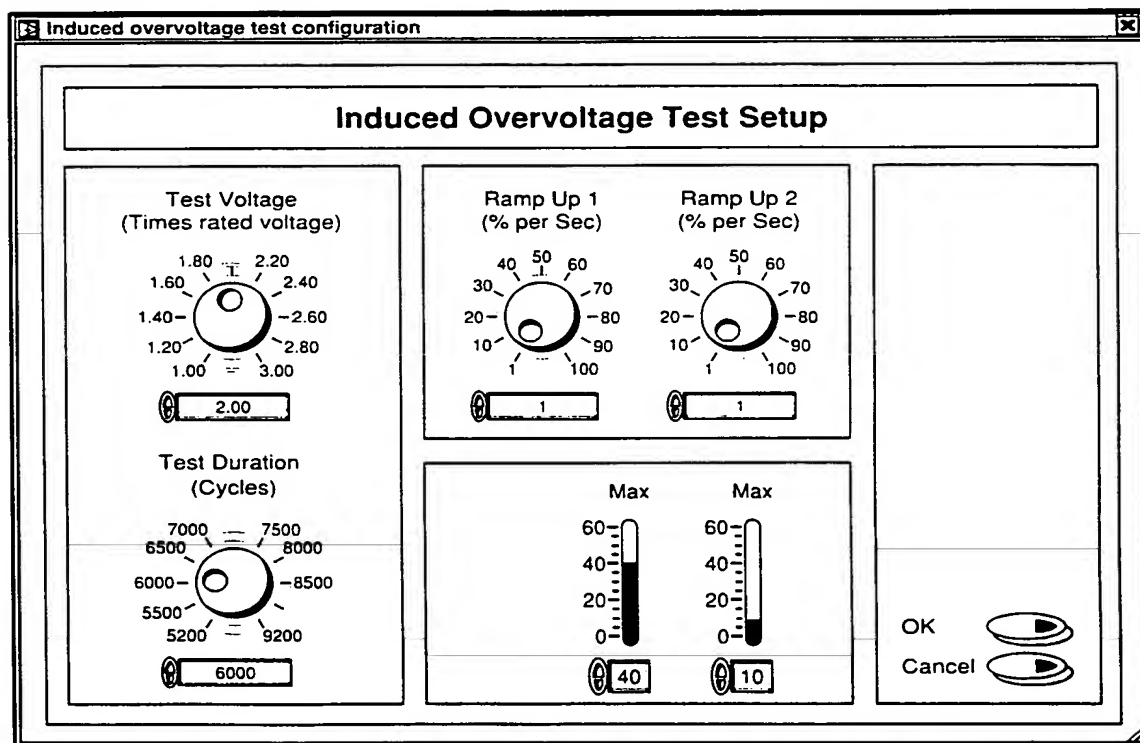


FIG. 6



Load test configuration

Load Test Setup

Test Current (Percent of nominal current) <input type="text" value="100"/>	Ramp Up 1 (% per Sec) <input type="text" value="1"/>	Ramp Up 2 (% per Sec) <input type="text" value="1"/>	Temperature (C) Max Min <input type="text" value="40"/> <input type="text" value="10"/>
Stability Current (Percent of test current) <input type="text" value="2.0"/>	Tap <input type="text" value="Nominal"/>	T ref <input type="text" value="75"/>	OK Cancel

FIG. 7

Setup-Mag current.vi

Magnetizing Current

Test Voltage (V) <input type="text" value="100"/>	Ramp Up 1 (% per Sec) <input type="text" value="1"/>	Ramp Up 2 (% per Sec) <input type="text" value="1"/>	
Stability Range (Percent of test voltage) <input type="text" value="2.00"/>	Max Min <input type="text" value="40"/> <input type="text" value="10"/>		OK Cancel

FIG. 8



Megger test configuration

Megger Test

Test Voltage (V)

2000 3000
1000 4000
0 5000

2500

Test Duration (Seconds)

100 150 200
50 250
0 300

60

Measurements

15
60

Add
Delete

Time

0

Add
Delete

Temperature (C)

Max Min

60 60
40 40
20 20
0 0

40 10

OK
Cancel

FIG. 9

No load test configuration

No Load Test Setup

Test Voltage (Percent of nominal voltage)

85 90 95
80 100
75 105
70 110

100

Stability Range (Percent of test voltage)

2.5 3.0 3.5
2.0 4.0
1.5 4.5
1.0 5.0

2.00

Ramp Up 1 (% per Sec)

40 50 60
30 70
20 80
10 90
1 100

1

Ramp Up 2 (% per Sec)

40 50 60
30 70
20 80
10 90
1 100

1

Temperature (C)

Max Min

60 60
40 40
20 20
0 0

40 10

T ref

150
100
50
0

20

☒ Correct?

OK
Cancel

FIG. 10



Ratio test configuration

Ratio Test Setup

Taps Tested

☐ All?

Taps

Nominal

Add

Delete

Max

60
40
20
0

40

Min

60
40
20
0

10

OK

Cancel

FIG. 11

Resistance test configuration

Resistance Test Setup

Test Current (%)

5 6 7 8 9 10
4 3 2 1

10.0

T ref

150
100
50
20

75

Temperature (C)

Max

60
40
20
0

40

Min

60
40
20
0

10

Taps Tested

☐ IEC?
☐ All?

Taps

Nominal

Add

Delete

OK

Cancel

FIG. 12



Automated Test

Hardware Status

CT Tap

All Open

PT Tap

All Open

Megger switch ☐

Visible disconnect ☐

Shorting switch ☐

Resistance H switch ☐

Resistance L switch ☐

Step up tap

No Tap

Output mode

50 Hz TTS

Deck

1 2 3

Sw. Network

Err Err Err

Output energized ☐

Emergency ☐

Error ☒

Test Results

Applied ☐

Side	Vt	Status

Mag current ☐

Vt	I	Status
0380		ERR

Induced ☐

Vt	I	Status

Megger ☐

Side	Vt	Status
HG	2000	ERR
HL	2500	ERR

Losses ☐

Load loss ☐

Vt	Imp.	Status
0396.0		ERR

No load loss ☐

Vt	Status
254.1	ERR

At 100%

Total losses 0.00

Ratio ☐

Tap	Status

Resistance ☐

Tap	Status

Temperature

50

25

0

21.26

Tester

Date

Time

Commands

Start

Stop

Reset

Change TUT

Screen

Hardware status

Details

Exit

Test Sequence

%

#	Test	Parameters
1	Ratio	TM= 40 C; Tm= 10 C; TP= 30
2	Resistance	TC= 50 A; TM= 40 C; Tm= 10 C; TP= 40
3	Mag current	TV= 380 V; RU= 1 V/s; AT= 1; SR= 2.0%; TM= 40 C; T
4	Load test	TC= 100 %; RU= 1 V/s; AT= 1; SR= 2.0%; TM= 40 C; T
5	No load test	TV= 105 %; RU= 1 V/s; AT= 1; SR= 2.0%; TM= 40 C; T
6	Megger, HL	TV= 2500 V; TD= 60 s; TM= 40 C; Tm= 10 C; M1= 15 s;
7	Megger, HG	TV= 2000 V; TD= 60 s; TM= 40 C; Tm= 10 C; M1= 15 s;

FIG. 13